NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

32. Group subsidiaries, joint ventures and associated companies
As at December 31, 2001 (Continued)

	Equity Interest	Holding/ Finance	Sales	Production	Research
South Africa					
Novartis South Africa (Pty) Ltd., Spartan/Johannesburg	●		◆	▼	
South Korea					
Novartis Korea Ltd., Seoul	●		◆	▼	
Spain					
Novartis Farmacéutica, S.A., Barcelona	●	■	◆	▼	
Biochemie, S.A., Les Franqueses del Vallés/Barcelona	●		◆	▼	▲
Novartis Consumer Health, S.A., Barcelona	●		◆	▼	
Sweden					
Novartis Sverige Participations AB, Täby/Stockholm	●	■			
Novartis Sverige AB, Täby/Stockholm	●		◆		
CIBA Vision Nordic AB, Askim/Göteborg	●		◆		
Switzerland					
Novartis International AG, Basel	●	■			
Novartis Pharma AG, Basel	●	■	◆	▼	▲
Novartis Holding AG, Basel	●	■			
Novartis Securities AG, Basel	●	■			
Novartis Research Foundation, Basel	●				▲
Novartis Foundation for Management Development, Zug	●	■			
Novartis Ophthalmics AG, Hettlingen	●	■	◆	▼	▲
Novartis Pharma Services AG, Basel	●		◆		
Novartis Pharma Schweizerhalle AG, Schweizerhalle	●			▼	
Novartis Pharma Stein AG, Stein	●			▼	▲
Novartis Pharma Schweiz AG, Bern	●		◆		
Novartis Consumer Health S.A., Nyon	●	■	◆	▼	▲
Novartis Consumer Health International S.A., Nyon	●		◆		
Novartis Consumer Health Schweiz AG, Bern	●		◆		
Novartis Nutrition AG, Bern	●	■			
Wander AG, Neuenegg	●			▼	
CIBA Vision AG, Embrach	●	■	◆		
Novartis Animal Health AG, Basel	●	■	◆	▼	▲
Novartis Centre de Recherche Santé Animale S.A., St.Aubin	●				▲
Taiwan					
Novartis (Taiwan) Co., Ltd., Taipei	●		◆	▼	
Thailand					
Novartis (Thailand) Limited, Bangkok	●		◆		
Novartis Nutrition (Thailand) Limited, Bangkok	◗		◆	▼	
Turkey					
Novartis Saglik, Gida ve Tarim Ürünleri Sanayi ve Ticaret A.S., Istanbul	●		◆	▼	

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

32. Group subsidiaries, joint ventures and associated companies As at December 31, 2001 (Continued)

	Equity Interest	Holding/ Finance	Sales	Production	Research
USA					
Novartis Corporation, Summit, NJ	●	■			
Novartis Finance Corporation, New York, NY	●	■			
Novartis Pharmaceuticals Corporation, East Hanover, NJ	●		◆	▼	▲
Novartis Ophthalmics, Inc., Duluth, GA	●		◆	▼	
Novartis Institute for Functional Genomics, Inc., San Diego, CA	●				▲
Genetic Therapy, Inc., Gaithersburg, MD	●				▲
Chiron Corporation, Emeryville, CA	○	■	◆	▼	▲
Geneva Pharmaceuticals, Inc., Plainsboro, NJ	●		◆	▼	▲
Biochemie US, Inc., Plainsboro, NJ	●		◆		
Novartis Consumer Health, Inc., Summit, NJ	●		◆	▼	▲
Novartis Nutrition Corporation, Minneapolis, MN	●		◆	▼	▲
Gerber Products Company, Fremont, MI	●	■	◆	▼	▲
Gerber Life Insurance Company, White Plains, NY	●		◆		
CIBA Vision Corporation, Duluth, GA	●	■	◆	▼	▲
Wesley Jessen Corporation, Des Plaines, IL	●	■	◆	▼	▲
Novartis Animal Health US, Inc., Greensboro, NC	●		◆	▼	▲
Venezuela					
Novartis de Venezuela, S.A., Caracas	●		◆		
Novartis Nutrition de Venezuela, S.A., Caracas	●		◆	▼	

In addition, the Group is represented by subsidiaries, associated companies or joint ventures in the following countries:

Algeria, Dominican Republic, Guatemala, Morocco, Russian Federation, Singapore, Uruguay and Vietnam.

● = subsidiary; >90% of the voting rights—fully consolidated

◗ = subsidiary; above 50% and up to 90% of the voting rights—fully consolidated

○ = investment in associated company; above 20% up to 50% of the voting rights—equity method accounting

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP)

The Group's consolidated financial statements have been prepared in accordance with IAS, which as applied by the Group, differs in certain significant respects from US GAAP. The effects of the application of US GAAP to net income and equity are set out in the tables below:

	Notes	2001	2001	2000	1999
		($ millions)[1]	(CHF millions)	(CHF millions)	(CHF millions)
Net income reported under IAS		**4,181**	**7,024**	**7,210**	**6,659**
US GAAP adjustments:					
Purchase accounting: Ciba-Geigy	a	(191)	(321)	(426)	(457)
Purchase accounting: other acquisitions	b	(166)	(279)	(232)	(271)
Restructuring costs	c			(72)	(931)
Available-for-sale securities and derivative financial instruments	d	(304)	(511)	787	107
Pensions and other post-employment benefits	e	(185)	(310)	43	86
Share-based compensation	f	(23)	(38)	(168)	(41)
Consolidation of share-based compensation foundations	g	(22)	(37)	(21)	(5)
Deferred taxes	h	(18)	(31)	(23)	(26)
In-process research and development	i	(557)	(936)	(143)	(2)
Other	j	16	28	33	11
Deferred tax effect on US GAAP adjustments		68	114	(75)	289
Net income reported under US GAAP		**2,799**	**4,703**	**6,913**	**5,419**
Basic earnings per share under US GAAP		**1.13**	**1.90**	**2.74**	**2.10**
Diluted earnings per share under US GAAP		**1.13**	**1.90**	**2.74**	**2.10**

[1] The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

	Notes	December 31, 2001	December 31, 2001	December 31, 2000
		($ millions)[1]	(CHF millions)	(CHF millions)
Equity reported under IAS		**25,146**	**42,245**	**36,862**
US GAAP adjustments:				
Purchase accounting: Ciba-Geigy	a	2,873	4,826	5,147
Purchase accounting: other acquisitions	b	3,158	5,305	5,467
Available-for-sale securities and derivative financial instruments	d			2,111
Pensions and other post-employment benefits	e	852	1,431	1,730
Share-based compensation	f	(35)	(58)	(66)
Consolidation of share-based compensation foundations	g	(559)	(939)	(753)
Deferred taxes	h	(371)	(621)	(590)
In-process research and development	i	(683)	(1,148)	(173)
Other	j	61	102	92
Deferred tax effect on US GAAP adjustments		(236)	(396)	(1,025)
Equity reported under US GAAP		**30,206**	**50,747**	**48,802**

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

NOTES TO THE NOVARTIS GROUP

CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

Components of equity in accordance with US GAAP

	December 31, 2001	December 31, 2001	December 31, 2000
	($ millions)[1]	(CHF millions)	(CHF millions)
Share capital	859	1,443	1,443
Treasury shares, at nominal value	(131)	(220)	(189)
Share premium	796	1,338	(2,493)
Retained earnings	28,227	47,422	48,661
Accumulated other comprehensive income:			
Currency translation adjustment	28	46	321
Unrealized market value adjustment on available-for-sale securities (net of taxes of CHF 115 million and CHF 213 million, respectively)	439	738	1,059
Unrealized market value adjustment on cash flow hedges net of taxes of CHF 24 million	(12)	(20)	
Total	**30,206**	**50,747**	**48,802**

[1] The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

Changes in US GAAP equity

	($ millions)[1]	(CHF millions)
January 1, 1999	**28,466**	**47,823**
Net income for the year under US GAAP	3,226	5,419
Dividends paid	(1,152)	(1,935)
Net unrealized market value adjustment	(213)	(358)
Increase in share premium related to stock-based compensation	43	73
Foreign currency translation adjustment	1,535	2,579
Acquisition of treasury shares	(1,801)	(3,026)
December 31, 1999	**30,104**	**50,575**
Net income for the year under US GAAP	4,115	6,913
Dividends paid	(1,229)	(2,064)
Net unrealized market value adjustment	510	857
Increase in share premium related to stock-based compensation	43	73
Foreign currency translation adjustment	(312)	(525)
Acquisition of treasury shares	(1,046)	(1,758)
Effect of Agribusiness spin-off	(3,136)	(5,269)
December 31, 2000	**29,049**	**48,802**
Change in accounting policy on cash flow hedges (CHF 138 million before taxes)	62	105
Net income for the year under US GAAP	2,799	4,703
Dividends paid	(1,306)	(2,194)
Net unrealized market value adjustment	(265)	(446)
Increase in share premium related to share-based compensation	27	46
Foreign currency translation adjustment	(164)	(275)
Acquisition of treasury shares	(2,384)	(4,005)
Issue of call and put options on Novartis shares	2,388	4,011
December 31, 2001	**30,206**	**50,747**

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

Discontinued Operations

Under IAS 35, the disposal of the Agribusiness sector was considered a discontinued operation as of December 1, 1999, when the Board of Novartis approved the divestment. However under US GAAP, the disposal did not qualify as a discontinued operation until the shareholders of Novartis approved the required transactions on October 11, 2000.

NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The income from continuing and discontinued Agribusiness operations under US GAAP as of December 31, 2001, 2000, and 1999, respectively is as follows:

	2001[1]	2001	2000	1999
	($ millions)	(CHF millions)	(CHF millions)	(CHF millions)
Income from continuing operations under US GAAP	2,799	4,703	6,346	5,230
Income from discontinued operations under US GAAP (net of taxes of CHF 0 million, CHF 314 million, and CHF 146 respectively)			567	189
Net income reported under US GAAP	**2,799**	**4,703**	**6,913**	**5,419**

	2001[1]	2001	2000	1999
	($)	(CHF)	(CHF)	(CHF)
Earnings per share				
Basic:				
Income from continuing operations under US GAAP	1.13	1.90	2.52	2.02
Income from discontinued operations under US GAAP			0.22	0.08
Basic earnings per share under US GAAP	**1.13**	**1.90**	**2.74**	**2.10**
Diluted:				
Income from continuing operations under US GAAP	1.13	1.90	2.52	2.02
Income from discontinued operations under US GAAP			0.22	0.08
Diluted earnings per share under US GAAP	**1.13**	**1.90**	**2.74**	**2.10**

(1) The Swiss franc amounts have been translated into United States dollars at the rate of 1.68 to the dollar. Such translations should not be construed as representations that the Swiss franc amounts represent, or have been or could be converted into, United States dollars at that or any other rate.

(a) Purchase accounting: Ciba-Geigy

The accounting treatment for the 1996 merger of Sandoz and Ciba-Geigy under IAS is different from the accounting treatment under US GAAP. For IAS purposes the merger was accounted for as an uniting of interests, however, for US GAAP the merger does not meet all of the required conditions of Accounting Principles Board Opinion No. 16 for a pooling of interests and therefore is accounted for as a purchase under US GAAP. Under US GAAP, Sandoz would be deemed to be the acquirer with the assets and liabilities of Ciba-Geigy being recorded at their estimated fair values and the results of Ciba-Geigy being included from December 20, 1996. Under US GAAP, the cost of Ciba-Geigy to Sandoz was approximately CHF 38.1 billion.

NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The components of the equity and income statement adjustments related to the US GAAP purchase accounting adjustment for 2001, 2000, and 1999 are as follows:

	2001 Components to reconcile		2000 Components to reconcile		1999 Components to reconcile	
	Net income	Equity	Net income	Equity	Net income	Equity
	(CHF millions)	(CHF millions)	(CHF millions)	(CHF millions)	(CHF millions)	(CHF millions)
Intangible assets related to marketed products	(429)	6,437	(528)	6,865	(548)	9,323
Tangible fixed assets	69	(1,029)	79	(1,098)	81	(1,375)
Inventory		711	(19)	711	(43)	980
Other identifiable intangibles	(32)	157	(60)	188	(66)	460
Investments	(34)	169	(34)	202	(34)	236
Deferred taxes	105	(1,619)	136	(1,721)	153	(2,405)
Total adjustment	**(321)**	**4,826**	**(426)**	**5,147**	**(457)**	**7,219**

The intangible assets related to marketed products and other identifiable intangibles are being amortized over 20 and 10 years, respectively.

As a result of the spin-off of Novartis Agribusiness in November 2000, CHF 1,646 million of the equity adjustment included in the US GAAP net assets, was spun-off to shareholders.

(b) Purchase accounting: other acquisitions

In accordance with IAS 22 (revised 1993), the difference between the purchase price and the aggregate fair value of tangible and intangible assets and liabilities acquired in a business combination is capitalized as goodwill and amortized over its useful life, not to exceed 20 years. Under US GAAP, the difference between the purchase price and fair value of net assets acquired as part of a business combination is capitalized as goodwill and amortized through the income statement over its estimated useful life, which may not exceed 40 years. For the purpose of the reconciliation to US GAAP, goodwill is generally being amortized through the income statement over an estimated useful life of 20 years.

Prior to January 1, 1995, the Group wrote off all goodwill directly to equity, in accordance with IAS existing at that time. The adoption of IAS 22 (revised 1993) did not require prior period restatement. The material component of goodwill recorded directly to equity, under IAS prior to January 1, 1995, related primarily to the acquisition of Gerber Products in 1994. The net book value of goodwill under US GAAP attributable to Gerber Products was CHF 4,815 million and CHF 4,845 million as of December 31, 2001 and 2000, respectively and is being amortized over 40 years.

(c) Restructuring costs

Under IAS, restructuring charges are accrued against operating income in the period management commits itself to a plan, it is probable a liability has been incurred and the amount can be reasonably estimated. Up to January 1, 2000 US GAAP was more prescriptive than IAS; for example, in order to qualify as restructuring costs under US GAAP, it was necessary that employees were informed regarding

NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

the key provisions of the restructuring plan prior to the end of the reporting period. Also, there was a rebuttable presumption under US GAAP that an exit plan would be completed and the exit costs incurred within one year from the commitment date. Therefore, certain costs permitted to be accrued under IAS up to January 1, 2000 were not allowable under US GAAP resulting in an additional US GAAP expense in 2000 and 1999 of CHF 72 million and CHF 931 million, respectively. There was no measurement difference in 2001.

The following schedule reconciles restructuring accruals under IAS to amounts determined under US GAAP.

	2001 (CHF millions)	2000 (CHF millions)
Total accruals in accordance with IAS	236	397
Reclassification of restructuring accruals to tangible fixed assets	(52)	(53)
Restructuring accruals in accordance with US GAAP	**184**	**344**

Restructuring accruals according to US GAAP are comprised of the following:

	2001 (CHF millions)	2000 (CHF millions)
Employee termination costs	59	140
Other third party costs	125	204
Restructuring accruals in accordance with US GAAP	**184**	**344**

(d) Available-for-sale securities and derivative financial instruments

Prior to the adoption of IAS 39 from January 1, 2001 in the IAS consolidated financial statements, investments were stated at the lower of cost or market value on an individual basis. Any losses resulting from the application of the lower of cost or market valuation were charged to the income statement. US GAAP requires for all years presented that investments in debt and certain equity securities are classified as either trading, available-for-sale, or held-to-maturity, depending on management's intent and ability with respect to holding such investments. Investments classified as available-for-sale are carried at fair value, with any unrealized gain or loss recorded as a separate component of equity. The Group's application of IAS 39 from January 1, 2001 is now consistent with US GAAP although under US GAAP the policy of recording in a separate component of equity unrealized gains or losses on available-for-sale marketable securities has been applied for a number of years. This results in a different amount of unrealized gains or losses being recorded in the separate component of equity under US GAAP compared to IAS and an additional expense under US GAAP on disposal of available-for-sale securities during 2001.

Under US GAAP for all years presented, the Group values all of its derivative financial instruments, except those related to cash flow hedges, that do not qualify for hedge accounting to fair value on an individual basis through the income statement. Concerning cash flow hedges, SFAS No. 133 "Accounting for Derivative Instruments and Hedging Activities" adopted from January 1, 2001 requires all derivative instruments including cash flow hedges be recorded on the balance sheet at their fair value. Changes in the

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

fair value of derivatives are recorded each period in current earnings or other comprehensive income. This resulted in the Group recording a net of tax cumulative-effect-type gain of CHF 105 million in accumulated other comprehensive income to recognize at fair value all derivative instruments that are designated as cash flow hedging instruments.

Prior to the adoption of IAS 39 on January 1, 2001 under IAS, the Group used the concept of portfolio valuation and only recorded net losses on portfolios of similar derivative financial instruments through the income statement, except for items that qualified for hedge accounting. Unrealized gains were not recorded. This also results in a difference between the IAS and US GAAP income statements due to recognition of gains or losses in different periods.

The above differences result in an additional US GAAP expense of CHF 511 million in 2001 (2000: CHF 787 million income; 1999: CHF 107 million income).

At December 31, 2001 the balance sheet values of all financial instruments under IAS and US GAAP are the same. At December 31, 2000 net unrealized gains of CHF 2.1 billion had not been recorded in the IAS consolidated financial statements, under the pre-IAS 39 accounting policies.

(e) Pensions and other post-employment benefits

Under IAS, pension costs and similar obligations are accounted for in accordance with IAS 19, "Employee Benefits". For purposes of US GAAP, pension costs for defined benefit plans are accounted for in accordance with SFAS No. 87 "Employers' Accounting for Pensions" and the disclosure is presented in accordance with SFAS No. 132 "Employers' Disclosures about Pensions and Other Post-retirement Benefits". The version of IAS 19 in force up to December 31, 1998 required that the discount rate used in the calculation of benefit plan obligations is of an average long-term nature, whereas US GAAP requires that the discount rate is based on a rate at which the obligations could be currently settled.

NOTES TO THE NOVARTIS GROUP

CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The following is a reconciliation of the balance sheet and income statement amounts recognized for IAS and US GAAP for both pension and post-employment benefit plans:

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
Pension benefits:			
Prepaid asset recognized for IAS	3,740	3,218	2,564
Difference in unrecognized amounts	1,637	1,874	1,909
Prepaid asset recognized for US GAAP	**5,377**	**5,092**	**4,473**
Net periodic income recognized for IAS	345	348	213
Amortization of transition asset		88	240
Difference in amortization of actuarial amounts	(237)	(78)	(161)
Net periodic pension benefit income recognized for US GAAP	**108**	**358**	**292**
Other post-employment benefits:			
Liability recognized for IAS	(698)	(676)	(630)
Difference in unrecognized amounts	(206)	(144)	(173)
Liability recognized for US GAAP	**(904)**	**(820)**	**(803)**
Net periodic benefit recognized for IAS	(72)	(77)	(62)
Amortization of actuarial amounts	(73)	33	7
Net periodic post-retirement benefit costs recognized for US GAAP	**(145)**	**(44)**	**(55)**
Total US GAAP income statement difference on pensions and other post-employment benefits	**(310)**	**43**	**86**

(f) Share-based compensation

The Group does not account for share-based compensation, as it is not required under IAS. Under US GAAP, the Group applies Accounting Principles Board Opinion No. 25 "Accounting for Stock Issued to Employees" and related interpretations in accounting for its plans. As described in Note 27, the Group has several plans that are subject to measurement under APB No. 25. These include the Non-US Share Option Plan, the Swiss Employee Share Ownership Plan, the US Management ADS Appreciation Cash Plan, the US ADS Incentive Plan, Leveraged Share Savings Program and the other Management Share Programs.

The *Non-US Share Option Plan* from 2001 is considered to be a fixed plan under APB No. 25 as the number of shares and all other parameters are known on the grant date which is therefore the measurement date. In prior years this was considered to be a variable plan, and until all parameters were fixed, the compensation expense was recorded at the balance sheet date by estimating the ultimate number of shares to be issued multiplied by the spread between the share price on the balance sheet date and the strike price. There was no compensation expense in 2001 (2000: CHF 11 million) since the grant date and measurement date are now the same and the strike price at that date was greater than the market price.

NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The *Swiss Employee Share Ownership Plan* is considered to be compensatory based on the amount of the discount allowed for employee share purchases. Compensation expense is recorded at the grant date and is calculated as the spread between the share price and the strike price on that date. During 2001, the Group sold 862,720 shares (2000: 1,429,520 shares) to employees for CHF 11 million (2000: CHF 18 million and 1999: CHF 19 million). Compensation expense for 2001 recognized under the Ownership plan was CHF 46 million (2000: CHF 72 million and 1999: CHF 73 million). The discount to the Group's share price was recorded in share premium. The percentage discount to the Group's share price under the ownership plan was 88% in 2001 (2000: 83%; 1999: 79%).

The *US Management ADS Appreciation Cash Plan* is considered to be variable because the final benefit to employees depends on the Group's share price at the exercise date. Compensation expense is recorded at each balance sheet date by estimating the number of rights outstanding multiplied by the spread between the share price on the balance sheet date and the strike price. Reduction in compensation expense and the release of the accrual under the Appreciation plan was CHF 37 million and CHF 32 million for 2001 and 1999, respectively. Compensation expense and the increase of the accrual under the Appreciation plan were CHF 77 million for 2000. This plan was supplemented in 2001 by the US ADS Incentive Plan.

The *Leveraged Share Savings Program* was first offered to selected executive officers and other employees in 2001. Employees can elect to receive all or part of their regular cash bonus in shares. The shares are blocked for a five year period at which time the bonus taken in shares are matched on a one-for-one basis. Compensation expense recognized under this plan was CHF 17 million for 2001.

The other *Management Share Programs* are considered to be compensatory based on the strike price for the underlying instruments, which is zero at the date of grant. Compensation expense is recorded at the grant date and is calculated as the number of instruments granted, multiplied by the share price on that date. Compensation expense recognized under these plans was CHF 12 million for the year ended December 31, 2001 (2000: CHF 8 million).

The total US GAAP expense of the above items is as follows:

	2001	2000	1999
	(CHF millions)	(CHF millions)	(CHF millions)
Option Plan		11	
Ownership Plan	46	72	73
US ADS incentive and ADS Appreciation Cash plans	(37)	77	(32)
Leveraged Share Savings plan	17		
Other Management Share programs	12	8	
Total US GAAP additional compensation expense	**38**	**168**	**41**

(g) Consolidation of share-based compensation foundations

The Group has an employee share participation foundation that settles the obligations of the Group's share-based compensation plans that is not required to be consolidated for IAS. However, this foundation is consolidated under US GAAP.

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

The impact of consolidating this foundation is to reduce net income by CHF 37 million, CHF 21 million and CHF 5 million in 2001, 2000 and 1999, respectively. US GAAP equity at December 31, 2001 and 2000 decreases by CHF 939 million and CHF 753 million, respectively.

(h) Deferred taxes

Under IAS 12 (revised) and US GAAP, unrealized profits resulting from intercompany transactions are eliminated from the carrying amount of assets, such as inventory. In accordance with IAS 12 (revised) the Group calculates the tax effect with reference to the local tax rate of the company that holds the inventory (the buyer) at period-end. However, US GAAP requires the tax effect to be calculated with reference to the local tax rate in the seller or manufacturer's jurisdiction.

(i) In-process research and development (IPR&D)

IAS does not consider that IPR&D is an intangible asset that can be separated from goodwill. Under US GAAP it is considered to be a separate asset that needs to be written-off immediately following the acquisition as the feasibility of the acquired research and development has not been fully tested and the technology has no alternative future use.

During 2001 IPR&D has been identified for US GAAP purposes in connection with acquisitions, principally the acquisition of 21.3% of the voting shares of Roche and the acquisition of the pitavastatin marketing rights.

A fair value determination of Roche was used to determine the CHF 356 million of IPR&D which has been expensed immediately. The independent appraisers used an excess earnings model and relied upon publicly available information from equity analyst reports. An excess earnings model captures the future cash flows attributable to the asset.

Under US GAAP marketing rights, such as those acquired for pitavastatin where the underlying product has not received regulatory approval, are classified as IPR&D and require expensing immediately. This resulted in an additional US GAAP expense of CHF 506 million.

During 2000 IPR&D was identified for US GAAP purposes in connection with acquisitions, principally Wesley Jessen.

The technology acquired with Wesley Jessen consisted of two projects and five technologies to be used in research and development. The successful completion of the acquired research and development projects is subject to achieving technological feasibility for each technology acquired. Further work is required to achieve this feasibility which is dependent on completing certain tasks for the projects to be used in research and development. Management anticipates that the tasks will be completed between 2002 and 2003 and commercialization of the projects between 2002 and 2005.

The income approach was used to determine the value of the ongoing research and development projects and technologies that were acquired in the purchase. Under this approach the value of the technology was based upon the present value of future cash flows over 15 to 18 years using a risk-adjusted discount rate of 15%. Management has reviewed the approaches used to value these technologies and agreed that they appropriately reflected the value of the technologies to the ongoing research and development efforts.

NOTES TO THE NOVARTIS GROUP
CONSOLIDATED FINANCIAL STATEMENTS (Continued)

33. Significant Differences Between IAS and United States Generally Accepted Accounting Principles (US GAAP) (Continued)

IPR&D recognized on other acquisitions amounted to CHF 74 million in 2001. The total IPR&D expense for 2001 was CHF 936 million (2000: CHF 143 million; 1999: CHF 2 million).

(j) Other

There are also differences between IAS and US GAAP in relation to (1) capitalized interest and capitalized software, (2) accretion on convertible debentures, and (3) LIFO inventory. None of these differences are individually significant and they are therefore shown as a combined total.

(k) Additional US GAAP disclosures

1) Financial assets and liabilities

Apart from the following exceptions, the US GAAP carrying value of financial assets and liabilities is equal to the IAS carrying values.

2) Cash, cash equivalents and time deposits

	2001	2000
	(CHF millions)	(CHF millions)
Carrying value of cash and cash equivalents under IAS	11,147	8,803
Carrying values of time deposits under IAS (Note 10)	2,689	2,238
Change due to consolidation of share-based compensation foundation under US GAAP	(1,137)	(935)
Total under US GAAP	**12,699**	**10,106**

3) Marketable securities

	2001	2000
	(CHF millions)	(CHF millions)
Carrying values of marketable securities under IAS (Note 10)	8,008	9,482
Carrying values of other investments under IAS	1,755	982
Unrealized gains not recorded under IAS (Notes 10 and 13)		2,113
Marketable securities in share-based compensation foundation consolidated under US GAAP	196	196
Total under US GAAP	**9,959**	**12,773**